

UNITED STATES OF AMERICA
 NATIONAL TRANSPORTATION SAFETY BOARD
 OFFICE OF ADMINISTRATIVE LAW JUDGES

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Investigation of:

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M/V MASSACHUSETTS FIRE
 JUNE 12, 2006

* Docket No.: DCA-06-MF-016

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Interview of: BARRY WILLIS

Boston, MA

Friday,
 June 16, 2006

The above-captioned matter convened, pursuant to
 notice, at 10:35 a.m.

BEFORE: BRIAN CURTIS
 Investigator-In-Charge

APPEARANCES:

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P R O C E E D I N G S

(8:25 a.m.)

MR. CURTIS: Good morning. I'm Brian Curtis, Investigator-In-Charge of the *Massachusetts* fire. It's June 16, at 8:25 a.m. and we're going to interview Mr. Barry Willis regarding any information he may have on the -- regarding the investigation of the fire on the "Massachusetts." Before we get started, I'd just like to around the room and identify for the transcriptionist who is here doing the interviewing.

Brian Curtis, NTSB.

MR. SPENCE: Jay Spence, Mass. Bay Lines.

MR. COLICHI: Chief Warrant Officer Ray Colichi, U.S. Coast Guard.

MR. LaRUE: Liam LaRue, NTSB.

MR. WILLIS: Barry Willis from Steve Shaff.

MR. CURTIS: All right, Barry, I'll get going here.

INTERVIEW OF BARRY WILLIS

BY MR. CURTIS:

Q. Just, first, your education and background.

A. I graduated high school, went to Southern Maine Tech in South Portland for marine engineering. Shipped out with Sun Transport for a year-and-a-half and been working for Steve ever since.

Q. Okay, and your job title with Steve is?

A. Marine Mechanic.

1 Q. Okay, and your employer is?

2 A. Steve Shaff.

3 Q. Steve Shaff, and that's located in --

4 A. That's in Charlestown.

5 Q. Charlestown, okay. Any -- as a mechanic, is it all
6 engine work or a little bit of everything? What are your
7 duties and responsibilities, I guess?

8 A. Mostly engine work. The shop we operate does some
9 welding and plumbing work and hydraulics, but my job is
10 primarily engine work.

11 Q. Any particular type engines?

12 A. I would say I specialize in Detroit's.

13 Q. Okay.

14 A. That's what I've worked on since I started with
15 Steve. I've been with Steve for almost 12 years.

16 Q. Okay. Do you have any GM Detroit training?

17 A. It's all been hands on.

18 Q. Okay. None at their GM facilities or any of that?

19 A. No, sir.

20 Q. Okay. Regarding the *Massachusetts*, we're interested
21 in the more recent work done. Say in the past week, going back
22 the last week, what work did you perform on it and specifically
23 which engines and just go through what you've done on the
24 vessel.

25 A. I believe -- what was the date of the fire?

1 Q. That was the afternoon of the 12th, Monday.

2 A. The 12th I was onboard. I did a visual inspection of
3 the starboard outboard and there was a stuck injector on the
4 port inboard, which I diagnosed and changed it out.

5 Q. Okay, the starboard outboard, if you'd just go
6 through everything, if you'd just go through everything you did
7 with that one and what you found and how you --

8 A. Pulled the valve covers off, ran up each injector,
9 make sure they were all firing, and pulled the air box
10 inspection plates off of number one cylinder, left and right
11 bank.

12 Q. And you made your determination just from that
13 inspection, then?

14 A. Just giving the overall condition of the engine.

15 Q. And what was your recommendation for that engine?

16 A. I believe it had a blown head gasket on both sides.
17 They were losing compression gas out from under the head, so we
18 need to pull the heads off.

19 Q. You did a compression check?

20 A. No, I did not.

21 Q. Okay. How do you tell it's a blown head gasket from
22 your observations?

23 A. You can simulate full throttle on each injector. So
24 number one on both sides, when I did so, a huge amount of
25 exhaust gas came out through the oil return holes in the

1 cylinder head and did come up right in your face pretty much.

2 Q. On the valve cover?

3 A. It would be under the valve. I had the valve cover
4 off at that time.

5 Q. Okay. You say there was one on each bank?

6 A. That's what it appeared to be.

7 Q. Okay.

8 A. I didn't spend a lot of time because collectively we
9 had decided to replace the engine anyway.

10 Q. Okay. To do that engine work you would actually pull
11 those engines out and --

12 A. Take the engine out. We have one built on the floor
13 ready to go back in already.

14 Q. Okay. Any work on the generators?

15 A. The port generator, we pulled the shroud off the
16 electrical end. There was a concern, I believe the week
17 before, somebody thought they saw a spark come out of it, and
18 they hadn't run it since, I don't believe. So we started it,
19 put it on line, and ran it for maybe 10 minutes and the
20 voltages were fine. There were no sparks shooting out of it.

21 Q. Okay.

22 A. We shut it down and I don't believe it was used
23 again.

24 Q. So you didn't find anything wrong with it then?

25 A. No.

1 Q. So that was Monday. What time of the day was that,
2 when you were onboard the vessel?

3 A. I believe I got onboard around 1:00. Right after
4 lunch I went over.

5 Q. And you were there about?

6 A. I think I got off around 3:00 or so.

7 Q. And that was at Charlestown?

8 A. Yes.

9 Q. That's the Suzuki dock?

10 A. Suburu.

11 Q. Okay. And were you alone during that -- from your
12 shop?

13 A. For most of the job I was alone. Steve came over to
14 look at the generator with me.

15 Q. That was done last or something?

16 A. Yes. And Steve Bodie was there while we were
17 looking.

18 Q. Okay, so you two and the captain, Steve Bodie?

19 A. Yes.

20 Q. Okay. You mentioned you worked on the port inboard?

21 A. Port inboard, yes, on the right bank.

22 Q. What was the complaint there?

23 A. The idle was at about 1,000. It wouldn't come down.

24 Q. Okay.

25 A. It had an injector -- the injector rack was stuck on

1 the -- I have to check my notes, but it was number three or
2 number four on the right bank of the engine.

3 Q. You mean the third or fourth back, you mean?

4 A. From the front of the engine, correct.

5 Q. Okay. Yeah, if you could just check your notes. We
6 always interested in any specific component work.

7 A. Sure. It was definitely the right bank of the
8 engine.

9 Q. The inboard bank?

10 A. Correct.

11 Q. On the port inboard engine?

12 A. Yes.

13 Q. And what did you do there?

14 A. Found which injector was stuck and replaced it.

15 Q. Okay. Just -- how do you tell -- how are you
16 visually aware -- how do you determine the injector is stuck?

17 A. Oh, the high idle of the engine is one way, and I
18 could actually hear one injector hitting harder between the two
19 sides of the engine. You pull the valve cover off and it's a
20 unit injector. It has its own fuel control rack built right
21 into the injector, and that was stuck. It wouldn't move.

22 Q. You could physically --

23 A. Physically see it jammed up.

24 Q. Okay. And if you have to change an injector, what's
25 -- if you could just go through part by part what you have to

1 pull off and put back on again.

2 A. You pull the valve cover.

3 Q. Okay.

4 A. You pull the two fuel lines off the injector.

5 Q. The two fuel lines. Is that a --

6 A. Supply and return.

7 Q. Okay.

8 A. And those are all under the valve cover.

9 Q. Okay.

10 A. You break the rocker stand bolts and the injector

11 pull down or the injector grab. You pull the injector out and

12 just put it back together.

13 Q. Okay. When you put it back together is there any

14 calibrations you have to make? Are they automatic?

15 A. No calibration. There's one torque setting for the

16 rocker stand bolts.

17 Q. Okay.

18 A. You just torque it down and put the fuel lines back

19 on and start it and check for leaks.

20 Q. Okay. I just looked in the box briefly there, and I

21 see you have like -- you said supply and return. I think the

22 injector was here. How do you determine supply from return? I

23 mean --

24 A. The fuel lines are two different lengths. You can't

25 mess it up.

1 Q. Oh, so one's --

2 A. Looking at it from the top of the engine, I'm not
3 sure which fuel stand is supply and return.

4 Q. Okay. But you have to take both of those off to pull
5 the injector, then?

6 A. Yes. You have to pull those off to get the rocker
7 stand bolts out, because the fuel line goes right across the
8 top of the bolt.

9 Q. Okay, and then it's just a matter of switching out
10 the injector, torque it back in, and hooking it up?

11 A. Yes.

12 Q. Do you have to bleed the system or anything, or don't
13 you need to do that?

14 A. No, it's a self-bleeding.

15 Q. Okay. So basically it pumps fuel through the supply
16 and return lines and the injector pulls off what fuel it needs?

17 A. Yes.

18 Q. Do you know like what fuel pressure that supply and
19 return runs at? Just curious.

20 A. At idle it's about 20 PSI and running wide open is 60
21 to 80, if I had to guess.

22 Q. Generally a low pressure pump, just supplying fuel to
23 the --

24 A. Yeah, it's just a gear pump.

25 Q. Any other work done on that engine, any other

1 components or anything?

2 A. No.

3 Q. If we could just see your notes later, just to see
4 what equipment you worked on there.

5 A. Sure.

6 Q. Was there an invoice associated with that work or has
7 it been developed, yet?

8 MR. SPENCE: We haven't seen any yet. I haven't seen
9 it yet, but it will be coming.

10 MR. WILLIS: I'm sure you'll get it.

11 BY MR. CURTIS:

12 Q. Okay, I just want to see, you know, your notes,
13 Barry, and the invoice as a matter of course for all the work
14 performed that day.

15 A. Okay.

16 Q. You say you work primarily on Detroit's, then?

17 A. That's probably 80 percent of the work I do. When I
18 first started working for Steve, we were the maintenance
19 facility for the Hingham commuter boat, and that was a fleet
20 of, I believe, six boats that all were running the same engines
21 that the *Massachusetts* has. So I've put a lot of time in on
22 those engines.

23 Q. So how long have you worked with Mass. Bay Lines?

24 A. What year did we lose the contract, Jay?

25 MR. SPENCE: Nine years ago.

1 MR. WILLIS: That's probably when we started doing
2 Jay's engine work.

3 BY MR. CURTIS:

4 Q. Okay. Typically -- do you have a routine schedule
5 you check the engines, or you just called in maintenance,
6 repairs?

7 A. We just do repairs.

8 Q. Okay, so you don't do periodic inspections of the
9 engines?

10 A. No. Unless they have a problem. I mean, the crew
11 pays attention to what the engines are doing. If they see
12 smoke or loss of power, they'll call us to come look at it.

13 Q. And that day, so, you worked on the starboard
14 outboard, checked the generator and the port inboard engine?

15 A. Correct.

16 MR. CURTIS: Okay. All right, I'll pass it along to
17 Jay. Any questions?

18 MR. SPENCE: I really don't.

19 MR. CURTIS: As we speak, if we just identify
20 ourselves.

21 MR. SPENCE: Jay Spence.

22 MR. CURTIS: Ray wasn't --

23 BY MR. COLICHI:

24 Q. Ray Colichi, Coast Guard.

25 Sir, do you use a tech manual or do you have access

1 to tech manuals which are on the boat?

2 A. I have access to them. Generally I don't need them.
3 The torque specs are -- I've memorized them. It's a very
4 simple procedure.

5 Q. Okay. What components do get torqued?

6 A. The rocker stand bolts are 104 pounds. The injector
7 hold down is 25.

8 Q. And the fuel lines, are they hand tight or how do --

9 A. Those, I don't torque them. I just put them as tight
10 as I can get them or tight as I feel comfortable with.

11 Q. Okay.

12 A. It's similar to a flare nut arrangement.

13 Q. Okay.

14 A. The fuel line is flared and the fuel stand has the
15 male piece -- so if you over tighten, then, you could split the
16 seed of the fuel line.

17 Q. Okay. And you put it together and test ran it with
18 the cover or without the cover?

19 A. I started with the valve cover off.

20 Q. Okay.

21 A. So you can inspect the fuel lines to make sure
22 they're not leaking. And you run the injector up again to make
23 sure you didn't get a bad reconditioned injector, make sure it
24 still fires.

25 Q. And you can run that up independent of the --

1 A. Of the whole engine, yes.

2 MR. COLICHI: Okay. Thank you.

3 MR. LaRUE: Liam LaRue, no questions at this time.

4 BY MR. CURTIS:

5 Q. Just a couple, Barry. I'm not familiar with looking
6 at everything down there. How does GM number their cylinders,
7 I mean one, two, three, four?

8 A. As far as GM does it -- the way I was taught is one
9 through six left and right from the front of the engine.

10 Q. So just -- oh, so you go left bank, right bank, one
11 through six?

12 A. Correct.

13 Q. Okay. I wasn't clear of the numbering. Okay. Like
14 I say, if you'd just check your notes and get a copy of those
15 later, maybe just -- and tech manuals, you keep them in the
16 shop, then?

17 A. Yes.

18 Q. Are those books? Are they electronic?

19 A. No, they're books. They're in hard copy.

20 Q. Just one -- any problems you see on the *Massachusetts*
21 when you work on it periodically that seem to be recurring with
22 the engines or anything?

23 A. No, nothing in particular. I mean, they're running
24 all the time. I mean, things are going to break. But there's
25 nothing that keeps occurring that's a real problem, I don't

1 think.

2 Q. Okay. So there wasn't -- each time you went over
3 there it was always something different, nothing -- I mean, it
4 wasn't like you were getting called every month for the same
5 component or any --

6 A. No.

7 Q. That's all I have. Okay, Barry, I guess that's it.
8 Anything you have or otherwise we'll conclude.

9 A. I don't think I have anything else.

10 Q. Okay, it's 8:40. Thanks a lot, Barry. We appreciate
11 your time. And that ends the interview, thanks.

12 (Whereupon, at 8:40 a.m., the interview in the above-
13 entitled matter was concluded.)

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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: M/V Massachusetts Fire
 June 12, 2006
 Interview of Barry Willis

DOCKET NUMBER: DCA-06-MF-016

PLACE: Boston, MA

DATE: June 16, 2006

was held according to the record, and that this is the
original, complete, true and accurate transcript which has been
compared to the recording accomplished at the hearing.

Phyllis Jarvis
Transcriber